REMARKS

This communication responds to the Office Action mailed December 5, 2007. Claims 1 and 5 are amended, claim 4 is canceled, and no claims are added. As a result, claims 1-3 and 5-29 are now pending in this application.

§102 Rejection of the Claims

Claims 1-10 and 12-27 were rejected under 35 USC § 102(e) as being anticipated by Moon (U.S. 7,058,037 B1). Applicant does not admit that Moon is prior art and reserves the right to swear behind this reference at a later date. In addition, because the Office has not properly established a *prima facie* case of anticipation, the Applicant respectfully traverses this rejection of the claims.

Anticipation under 35 USC § 102 requires the disclosure in a single prior art reference of each element of the claim under consideration. *See Verdegaal Bros. V. Union Oil Co. of California,* 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, "[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim*." *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). "The *identical invention* must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP § 2131 (emphasis added).

Independent claim 9 recites, with emphasis added:

> 9. An apparatus, including:
> **a first digital mixer to receive a digital baseband signal** and to provide a first elevated frequency digital baseband signal;
> **a phase shifting module to receive the digital baseband signal and to provide a phase-shifted version of the digital baseband signal**;
> **a second digital mixer to receive the phase-shifted version of the digital baseband signal** and to provide a second elevated frequency digital baseband signal; and

> **a digital to analog converter** to receive a selected one of the first elevated frequency digital baseband signal and the second elevated frequency digital baseband signal and **to provide an analog signal to an image reject mixer.**

Applicant submits that Moon does not disclose the features that "**a first digital mixer to receive a digital baseband signal**" and "**a second digital mixer to receive the phase-shifted version of the digital baseband signal**" as recited in claim 9. The Office asserts that Moon teaches the first and second digital mixers as elements d and d' of FIG. 4, respectively. Applicant disagrees.

From FIG. 4 of Moon, it can be seen that, in contrast to claim 9, mixers d and d' of Moon do not respectively receive a baseband signal (e.g., 11) and a phase-shifted version of the baseband signal. Rather, the mixers d and d' receive filtered versions of original baseband signals (e.g., 11), respectively filtered by filters (e.g., filters a and c for mixer d, filters a' and c' for mixer d').

Applicant also submits that Moon does not disclose the features that "**a phase shifting module to receive the digital baseband signal and to provide a phase-shifted version of the digital baseband signal**" as recited in claim 9. The Office asserts that Moon teaches the phase shifting module as element b of FIG. 4. Applicant disagrees.

From FIG. 4 of Moon, relied upon by the Office, it can be clearly seen that, in contrast to claim 9, digital local oscillator b does not receive the digital baseband signal at all, much less providing a phase-shifted version of the digital baseband signal.

Applicant further submits that Moon does not disclose the features of "**a digital to analog converter ..... to provide an analog signal to an image reject mixer**" as recited in claim 9. The Office asserts that Moon teaches a frequency converter, element 110 of FIG. 3, which has a SAW filter 112 etc, and concludes that this frequency converter 110 is the same as the claimed image reject mixer (IRM) by reasoning "image rejected is well known in the art to be achieved by a SAW" filter or band-pass filter. Applicant disagrees with the conclusion reached by the Office, because Moon does not teach using SAW filters or band-pass filters to function as an IRM, and further SAW filters or band-pass filters cannot automatically function as an IRM without specific design and modification for that purpose.

In sum, for at least the above reasons, Moon does not disclose each and every element of claim 9, and thus does not anticipate independent claim 9.

Similar reasoning applies to amended independent claim 1. Applicant submits that Moon does not teach the feature "a digital mixer to receive the digital baseband signal and to provide the first elevated frequency digital baseband signal" as recited in amended claim 1, and thus does not anticipate amended claim 1.

Finally, with respect to independent claims 18 and 26, Moon does not teach a "**shifting a digital baseband signal upward along a frequency spectrum by a selected amount to provide a first elevated frequency digital baseband signal and a second elevated frequency digital baseband signal derived from a phase-shifted version of the digital baseband signal**" as claimed by the Applicant. This is because mixers d and d' of Moon do not respectively receive a baseband signal itself and its phase-shifted version, rather, they receive filtered baseband signals respectively filtered by filters, e.g., filters a and c for mixer d, filters a' and c' for mixer d'.

Accordingly, Moon does not anticipate independent claims 1, 9, 12, 18, and 26 as well as their dependent claims. Reconsideration and withdrawal of the rejections under § 102 are therefore respectfully requested.

§103 Rejection of the Claims

Claims 11, 28 and 29 were rejected under 35 USC § 103(a) as being unpatentable over Moon in view of Dent (U.S. 5,351,016). Applicant does not admit that Moon or Dent are prior art, and reserves the right to swear behind each of these references in the future. In addition, since a *prima facie* case of obviousness has not been established, Applicant respectfully traverses these rejections.

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d (BNA) 1596, 1598 (Fed. Cir. 1988). In combining prior art references to construct a *prima facie* case, the Examiner must show some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art that would lead an individual to combine the relevant teaching of the references. *Id.* The M.P.E.P. contains explicit direction to the Examiner that agrees with the *In re Fine* court:

> In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d (BNA) 1438 (Fed. Cir. 1991)).

No proper *prima facie* case of obviousness has been established because no combination of Moon or Dent has been suggested that results in "shifting a digital baseband signal upward along a frequency spectrum by a selected amount to provide a first elevated frequency digital baseband signal and a second elevated frequency digital baseband signal derived from a phase-shifted version of the digital baseband signal ..." (independent claim 26), as is claimed by the Applicant. Claims 28-29 are nonobvious because any claim depending from a nonobvious independent claim is also nonobvious under 35 USC § 103. *See* M.P.E.P. § 2143.03. Therefore, the rejections of claims 28-29 under 35 U.S.C. § 103(a) is improper; reconsideration and withdrawal are respectfully requested.

RESERVATION OF RIGHTS

In the interest of clarity and brevity, Applicant may not have addressed every assertion made in the Office Action. Applicant's silence regarding any such assertion does not constitute any admission or acquiescence. Applicant reserves all rights not exercised in connection with this response, such as the right to challenge or rebut any tacit or explicit characterization of any reference or of any of the present claims, the right to challenge or rebut any asserted factual or legal basis of any of the rejections, the right to swear behind any cited reference such as provided under 37 C.F.R. § 1.131 or otherwise, or the right to assert co-ownership of any cited reference. Applicant does not admit that any of the cited references or any other references of record are relevant to the present claims, or that they constitute prior art. To the extent that any rejection or assertion is based upon the Examiner's personal knowledge, rather than any objective evidence of record as manifested by a cited prior art reference, Applicant timely objects to such reliance on Official Notice, and reserves all rights to request that the Examiner provide a reference or affidavit in support of such assertion, as required by MPEP § 2144.03. Applicant reserves all

rights to pursue any cancelled claims in a subsequent patent application claiming the benefit of priority of the present patent application, and to request rejoinder of any withdrawn claim, as required by MPEP § 821.04.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (210) 308-5677 to facilitate prosecution of this application. If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

SCHWEGMAN, LUNDBERG & WOESSNER, P.A.
P.O. Box 2938
Minneapolis, Minnesota 55402
(210) 308-5677

By / Mark V. Muller /
Mark V. Muller
Reg. No. 37,509